

## SPI

### 1. Config the /dtoverlay/config.txt by adb commands.

- a. Pull the config.txt file for edit
  - adb root
  - adb remount
  - adb pull /dtoverlay/config.txt
- b. Edit the config.txt on PC to the following status

```
intf:fiq_debugger=off
intf:uart0=on
intf:uart4=off
intf:i2c6=on
intf:i2c7=on
#intf:i2s0=on
#intf:sndif=on
intf:spi1=on
intf:spi5=on
intf:pwm0=on
intf:pwm1=on
intf:pwm3a=on
#intf:test_clkout2=on
```
- c. Push the file to device
  - adb push config.txt /dtoverlay/
- d. Reboot the system
  - adb reboot

### 2. Install the MraaDemo app by the following commands and then open it

- a. Install apk commands
  - adb install -r MraaDemo\_TinkerBoard2.apk
- b. Open MraaDemo\_TinkerBoard2 app
  - Select app icon



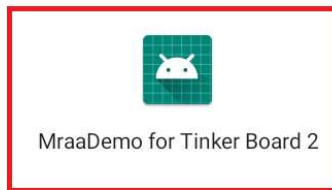
Clock



Contacts



Lightning



MraaDemo for Tinker Board 2



Settings



Sound Recorder

- SPI PINS

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MraaDemo for Tinker Board 2

	GPIO number	Function2	Function1	GPIO	Pin#	Pin#	GPIO	Function1	Function2	GPIO number
1	Io Map		VCC3.3V_IO		1	2		VCC5V_SYS		
2	Gpio		I2C6_SDA	GPIO2_B1	3	4		VCC5V_SYS		
			I2C6_SCL	GPIO2_B2	5	6		GND		
3	I2c		TEST_CLKOUT2	GPIO0_B0	7	8	GPIO2_C1	UART0_TXD		81
			GND		9	10	GPIO2_C0	UART0_RXD		80
4	Pwm		UART0_RTSN	GPIO2_C3	11	12	GPIO3_D0	I2S0_SCLK		120
			SPI5_TX	GPIO2_C5	13	14		GND		
5	Spi		SPI5_RX	GPIO2_C4	15	16	GPIO2_C6	SPI5_CLK		86
			VCC3.3V_IO		17	18	GPIO2_C7	SPI5_CSN		87
		UART4_TXD	SPI1_TXD	GPIO1_B0	19	20		GND		
		UART4_RXD	SPI1_RXD	GPIO1_A7	21	22	GPIO3_D4	I2S0_SDO3		124
			SPI1_CLK	GPIO1_B1	23	24	GPIO1_B2	SPI1_CSN		42
			GND		25	26	GPIO0_A6	PWM3A_IR		6
		I2C7_SDA		GPIO2_A7	27	28	GPIO2_B0	I2C7_SCL		72
		I2S0_SDO1		GPIO3_D6	29	30		GND		
		I2S0_SDO2		GPIO3_D5	31	32	GPIO4_C2	PWM0		146
		PWM1		GPIO4_C6	33	34		GND		
		I2S0_FS		GPIO3_D1	35	36	GPIO2_C2	UART0_CTSN		82
		SPDIF_TX		GPIO4_C5	37	38	GPIO3_D3	I2S1_SDI0		123
					39	40	GPIO3_D7	I2S1_SDO0		127

- SPI Test Screen

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MraaDemo for Tinker Board 2

Please input and select SPI bus: SPI1

SPI1

Please select a data display mode: Ascii

Ascii

Please enter the information sent to the slave:

Write Content:  SEND

Received Content:

3. Test the SPI1

a. Connect to following pin together by dupont line:

up 58K	GPIO1_B0/SPI1_TXD/UART4_TX	B39 / 1.8V	19
up 58K	GPIO1_A7/SPI1_RXD/UART4_RX	F37 / 1.8V	21

b. Select the app spi item and then you can get the following screen

Please input and select SPI bus: SPI1

SPI1

Please select a data display mode: Ascii

Ascii

c. Enter the value to text and then press the "SEND BUTTON"

Please enter the information sent to the slave:

Write Content:

Received Content: Aa

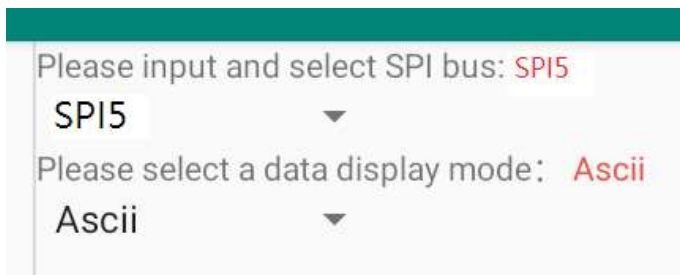
- d. Check the SPI send strings by "Received Content"  
Return: value is "Aa" --> Pass  
value is not "Aa" --> Fail

#### 4. Test the SPI15

- a. Connect to following pin together by dupont line:

up 85K	GPIO2_C5/SDIO0_D1/SPI5_TXD	AK6	13
up 84K	GPIO2_C4/SDIO0_D0/SPI5_RXD	AD8	15

- b. Select the app spi item and then you can get the following screen



- c. Enter the value to text and then press the "SEND BUTTON"

Please enter the information sent to the slave:

Write Content:

Received Content: Aa

- d. Check the SPI send strings by "Received Content"  
Return: value is "Aa" --> Pass  
value is not "Aa" --> Fail

#### 5. The SPI verify completely!